

STANDARD FORM NO. 64

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TO : The Files

DATE: 25 October 1957

FROM :

SUBJECT: Contract RD-103, Task 3 - High-Speed Page Printer

1. The [] is developing a high-speed page Printer for rapid message processing, for the high-speed base communications system, AS-4A. The page printer employs a single memory and a slack tape loop. The slack tape loop using magnetic tape will serve as a storage unit and will provide the necessary buffering for variations in the length of lines in incoming messages. However, too many short lines, each followed by a Carriage Return, and two Line Feeds would fill the buffer storage to over capacity shutting off the transport automatically.

2. An investigation has been made in an attempt to ascertain the extent of the problem, that is, the ratio of short lines to long lines encountered in Agency messages. The present message format consists of short lines covering the address and date-time groups, each line followed by a CR and two LF's. Next comes the body of the message and finally the message termination. The average occurrence of short lines and long lines is about 1 short line to 12 long lines, approximately 8-10% of a message consisting of short lines. For tape relay procedures there can be up to 14 or 15 additional short lines covering addresses.

3. Should the ratio of short to long lines become excessive one of the following solutions can be implemented by the Agency.

- a. The CR and two LF's at the end of each short line can be eliminated and the short lines can be blocked out into long lines.
- b. The short lines can be lengthened to an adequate number of characters by inserting SPACE impulses.

Normally, the Agency is not concerned with the ^{rate} relay of messages. However, in an emergency situation, Agency traffic might be handled by the AS-4A system and a tape relay capability would be essential. In this case, a large number of addresses would increase the short line average. Again, one of the above procedures could be employed to prevent overloading of the page printer if the number of short lines became excessive.

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